



Advanced Data Modeling and Connectivity

Session 711





Advanced Data Modeling and Connectivity

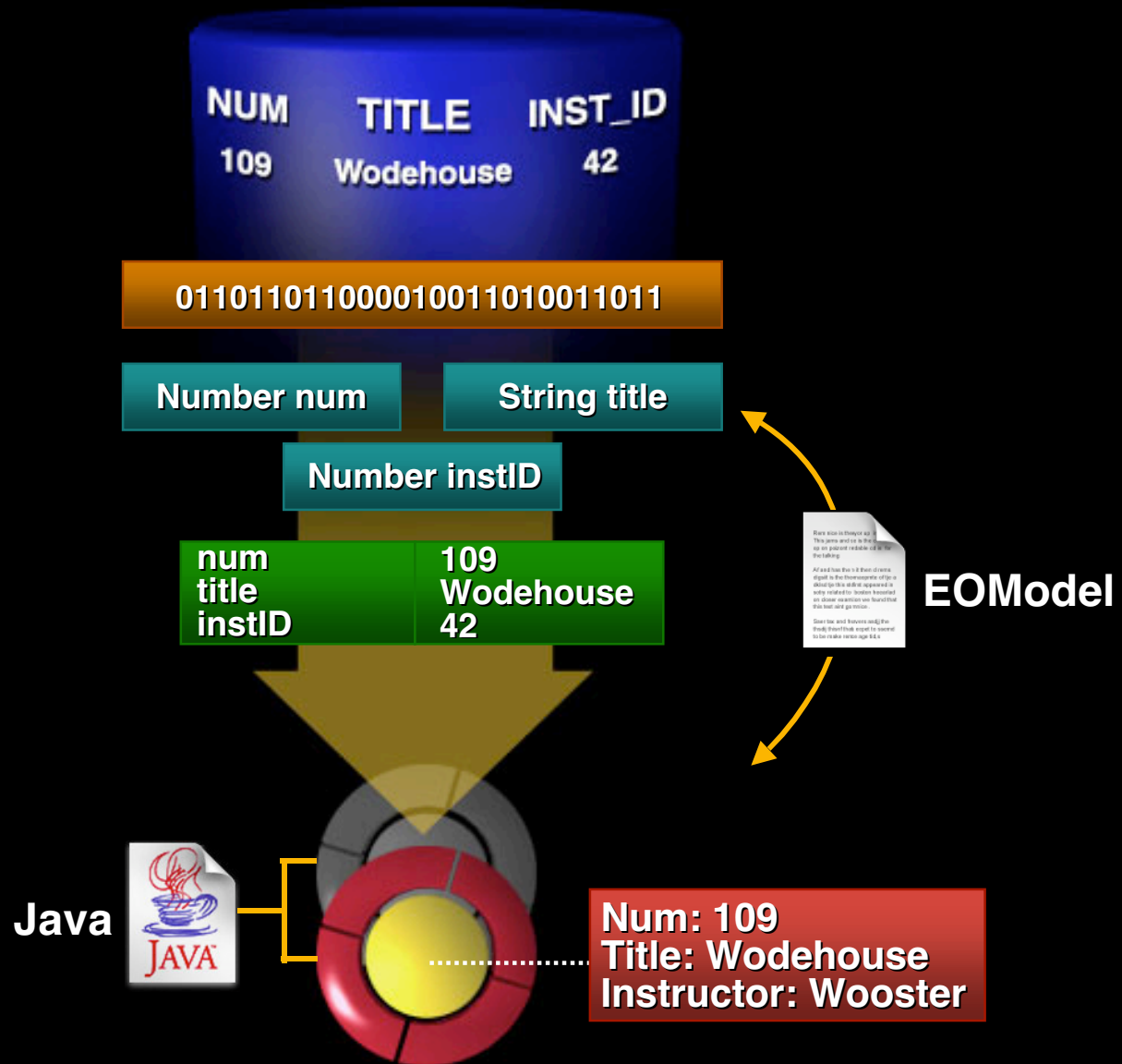
Matthew Firlik, Justin Henzie
Senior Software Engineers
PowerSchool

Introduction

- Using EOModeler to map relational data into objects
- JDBC Adaptor
- JNDI Adaptor



EOF



EOModel

- Entities
- Connection Dictionary
- Stored procedures

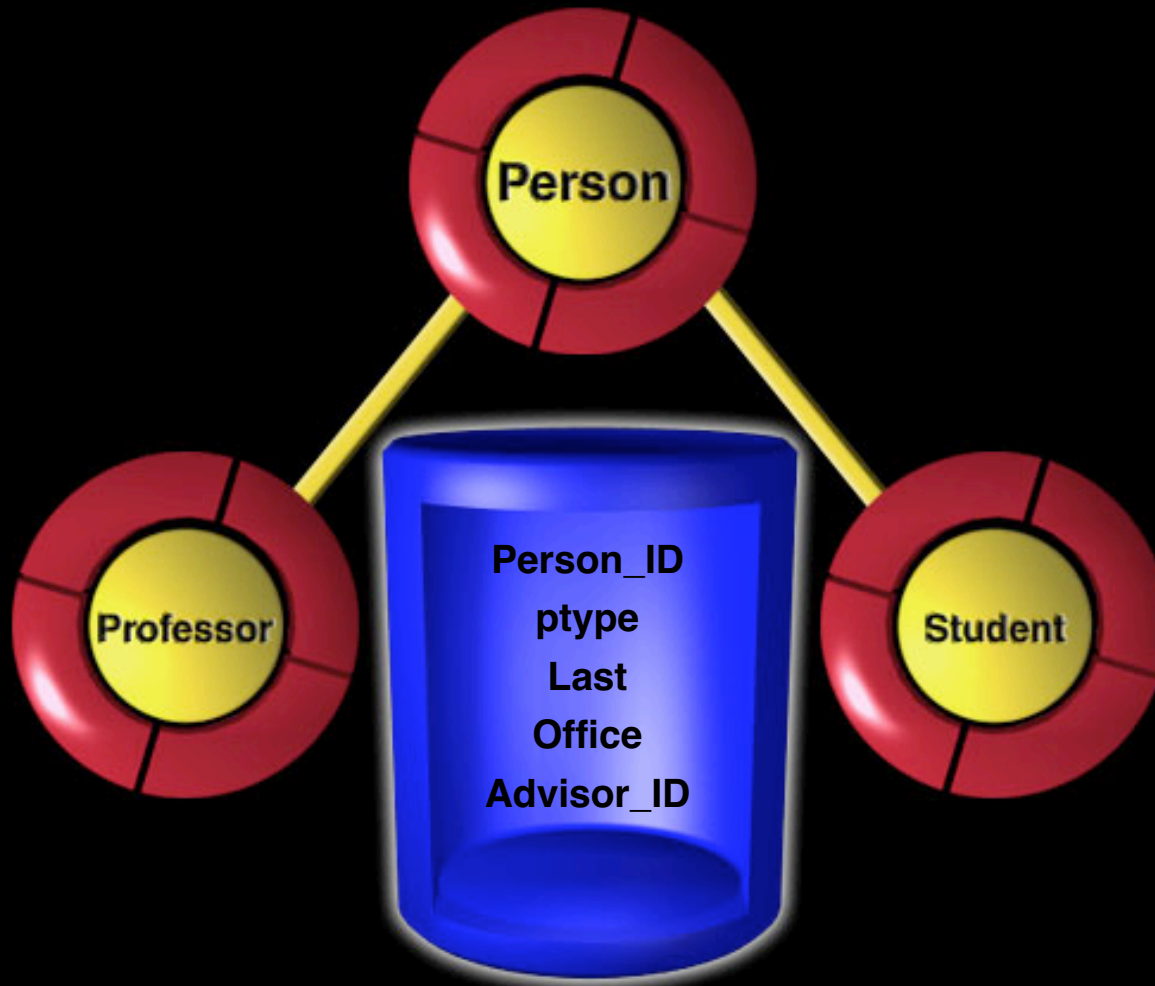


EOEntity

- Maps a table into a class
- Abstract
- Parent
- Restricting Qualifier
- Read-only
- Cached



Single Table Inheritance



EOAttribute

- Maps a column into a instance field
- Class Property
- Primary Key
- Allows null
- External Type
- Value Class
- Value Type



Advanced Attributes

- Read-only
- Custom formatting
- Custom value class
- Derived
- Flattened



EORelationship

- Maps a foreign key into another object
- To-one
- To-many
- Inverse relationships



Advanced Relationships

- Optional
- Propagate primary key
- Delete rules
- Owns destination
- Batch faulting



Creating Models and Tables

- Reverse engineering
- Generate SQL for tables
- Generate Java source file
- Schema synchronization

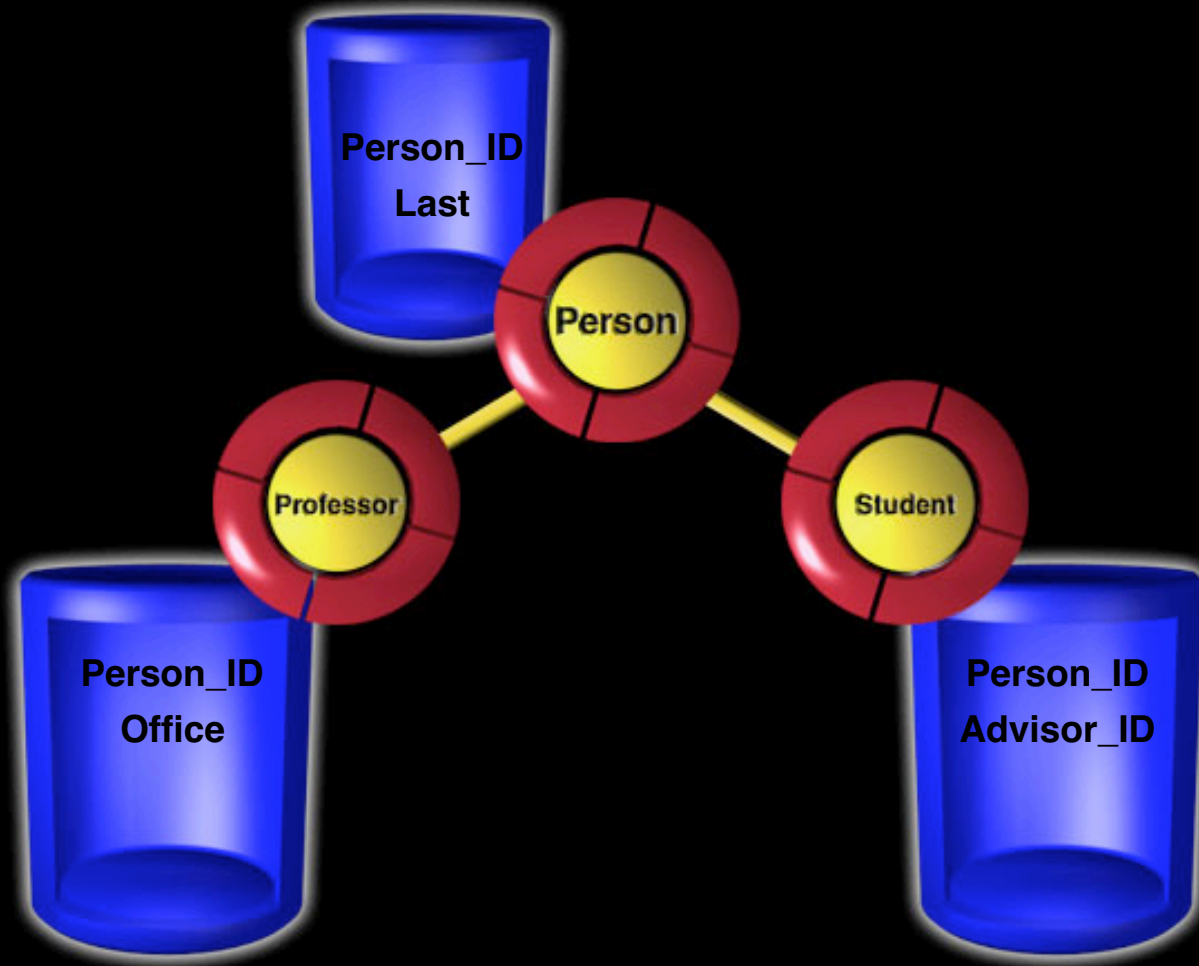


EOFetchSpecification

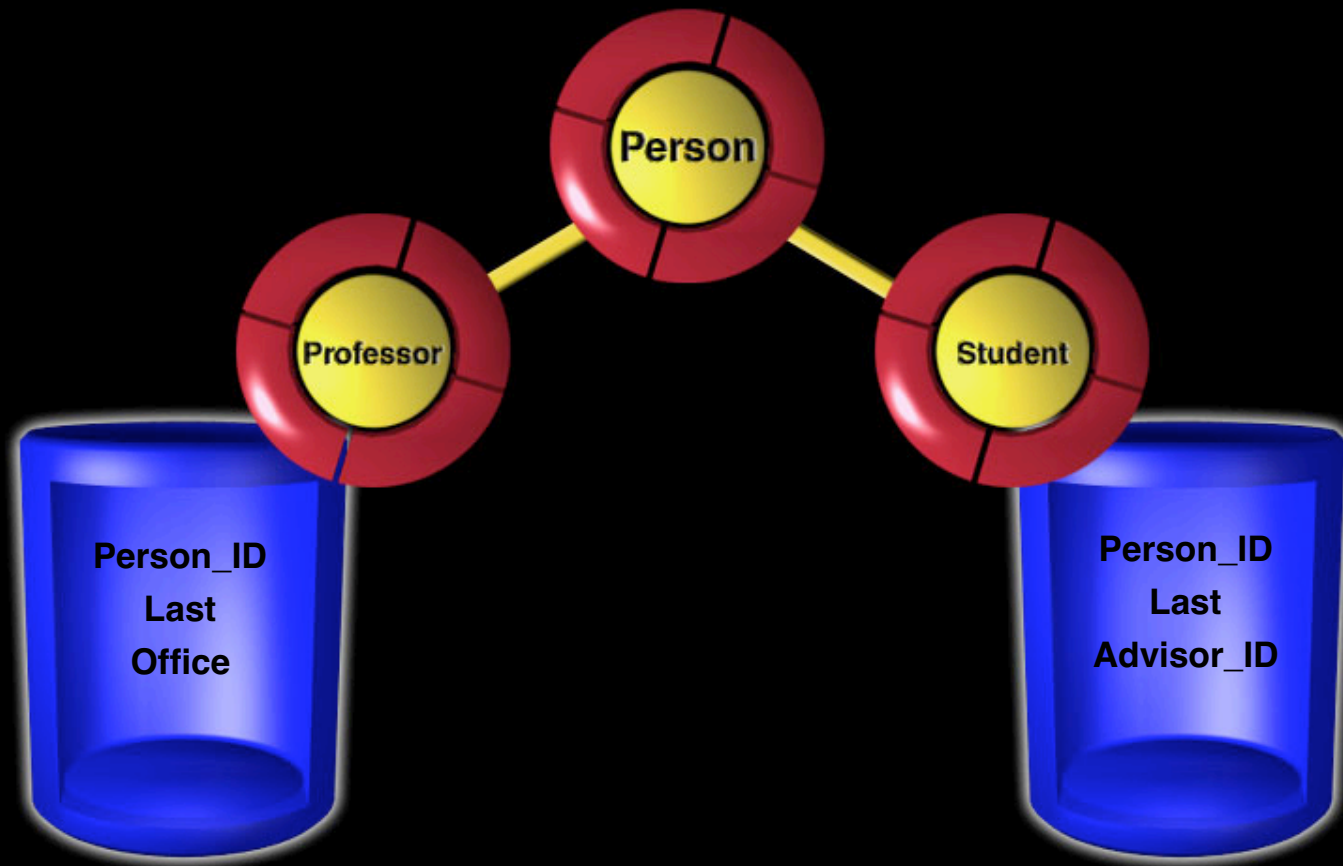
- Fetches objects from a database into an Editing Context
- EOQualifier
- isDeep



Vertical Inheritance



Horizontal Inheritance

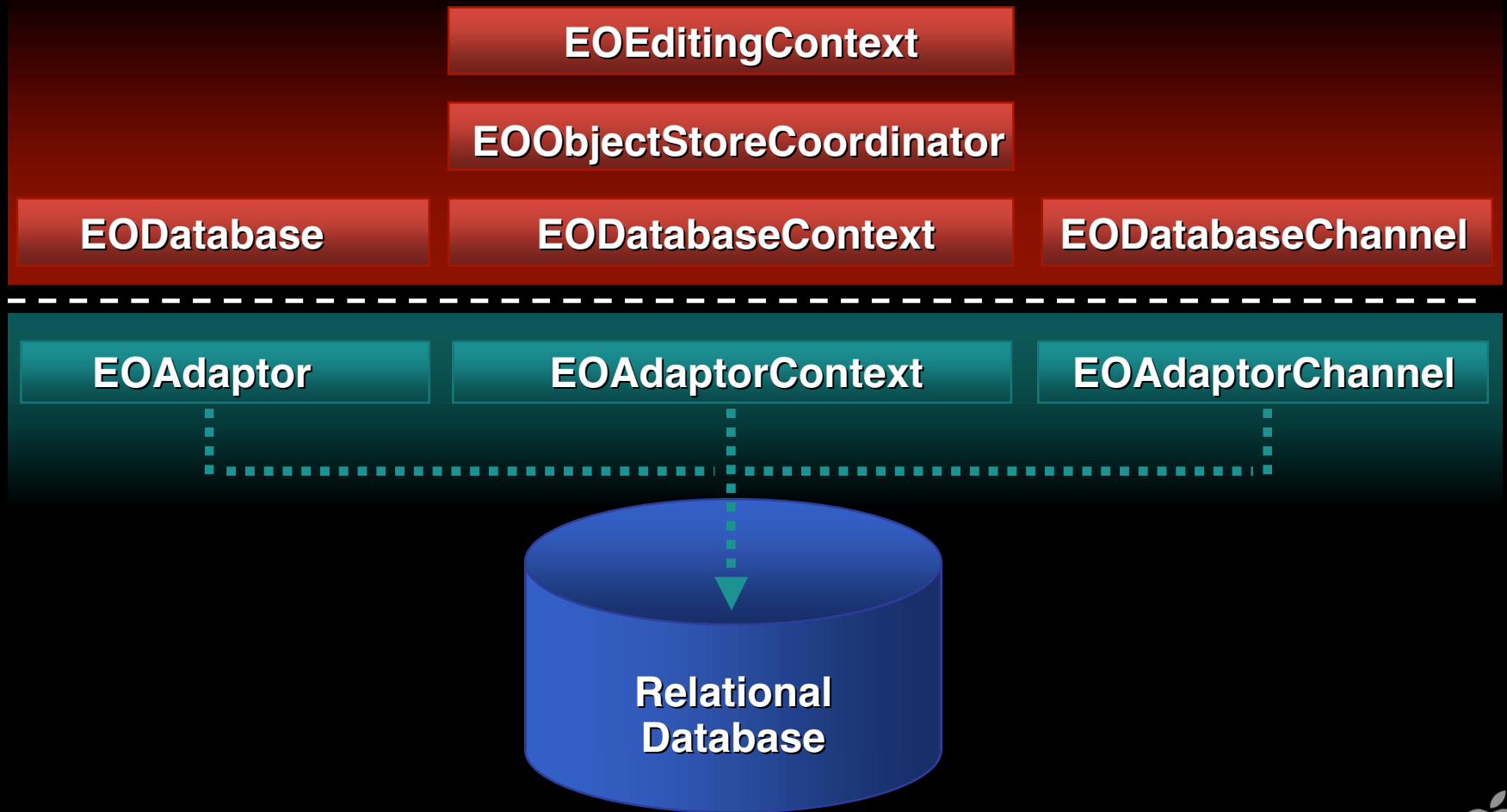


EOAdaptor

- Allows EOF to talk to a database
- EOAdaptorContext—manages connection for EODatabaseContext
- EOAdaptorChannel—sends queries for EODatabaseChannel



EOAdaptor Layer



JDBC Adaptor

- “The” database EOAdaptor for WebObjects 5
- JDBC
 - ODBC in Java
 - Standard API
- JDBCPlugIn
 - Handles DB-specific features



Connection Dictionary

- Username
- Password
- JDBC URL
- PlugIn (optional)
- Driver (optional)



JDBC URL

- Generic form

`jdbc:subprotocol:datasource`

- Examples

`jdbc:oracle:thin:@myhost:1521:sid`

`jdbc:openbase://localhost/WOMovies`



JDBCPlugIn

- Customizes adaptor behavior
- Default is guessed from subprotocol

jdbc:oracle: =>

com.webobjects.jdbcadaptor.OraclePlugIn

- `setPlugInNameForSubprotocol`



Driver

- JDBCPlugIn guesses default
- Override in connection dictionary
oracle.jdbc.driver.OracleDriver
- Install driver jar in classpath or “ext” directory
/Library/Java/Home/lib/ext/



Switch or Set Info?

- Switch adaptor
 - Alters connection information
 - Updates model (external types)
- Set adaptor info
 - Alters connection info



JNDI

- JNDI
 - Java Naming and Directory Interface
 - Standard API
- Connect to directory services
 - LDAP (Lightweight Directory Access Protocol)
 - NDIS (Netware Directory Services)
 - DNS (Domain Name System)
 - NIS (Network Information Service)



JNDI Adaptor

- “The” directory services EOAdaptor for WebObjects 5
- JNDIPlugin
 - Abstract class for implementation
 - LDAPPlugin



Connection Dictionary

- Authentication Method
- Initial Context Factory
- Plugin Class Name
- Timeout
- Scope



WebObjects Beta

- To be considered for the beta
Appleseed.apple.com/webobjects



WebObjects Lab

- Located downstairs in Room L
- Lab hours
 - Monday 12:00pm–6:00pm
 - Tuesday 9:00am–2:00pm
 - Wednesday 9:00am–6:00pm
 - Thursday 9:00am–6:00pm
 - Friday 9:00am–6:00pm



Roadmap

**712 Advanced Enterprise Objects
Frameworks**

Room A1
Thurs., 5:00pm

FF013 WebObjects

Room A1
Fri., 3:30pm



Who to Contact

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For More Information

- WebObjects Developer Documentation
<http://developer.apple.com/techpubs/webobjects>
- Apple Professional Services Technical Support
(www.apple.com/services/technicalsupport)
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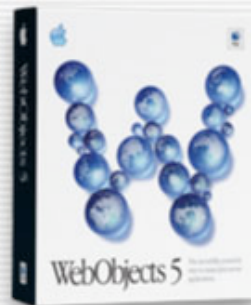
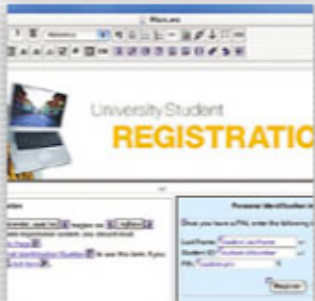
How to Access Documentation

- Most up-to-date: PDF and HTML
<http://developer.apple.com/techpubs/webobjects>
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Documents folder and installed in
[/Developer/Documentation/WebObjects](#)
- In the box (localized)
Installation Guides, What's New, WebObjects
Overview, Java Client Desktop Applications,
Discovering WebObjects for HTML
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Q&A



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<http://developer.apple.com/wwdc2002/urls.html>

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